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ABSTRACT

Disadvantaged eleventh graders who used a computer based guidance system (ECES) and traditional counseling for two years in making career decisions were compared. Frequency of changes and certainty concerning choice, feeling of involvement in decision making, and number of different jobs for which they would qualify are considered. A MANOVA analyzed the questionnaire responses. Counseling method, frequency of usage, and sex formed independent variables. Grade point average is a covariable. Significant differences generally favored males and traditional counseling. ECES more effectively furnished details concerning occupations. Traditional counseling assisted best with educational planning. Procedures for optimal combined usage of the methods appear indicated. (Author)

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TRADITIONAL vs COMPUTER BASED VOCATIONAL GUIDANCE AND COUNSELING SYSTEMS: IMPLICATIONS FOR DISADVANTAGED YOUTH

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Traditional vs Computer Based Vocational Guidance and Counseling Systems: Implications for Disadvantaged Youth

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Objectives

The study sought to provide insight into the part which computer-based vocational guidance systems may play in the vocational decision making of students from 'disadvantaged' home environments. These students are compared with a similar group who were guided in their vocational choice and planning over a two year period by means of the Traditional counselor-counselee approach. Two questions which form the basis for the study are:

(a) Do computer-based guidance systems effectively provide the kinds of occupational information (job descriptions, working conditions, salaries, etc.) as well as indicate other personal outcomes (aptitudes, abilities, attitudes, interpersonal skills, etc.) necessary for high school students to make appropriate vocational decisions?

(b) Will students hold different attitudes toward securing information from a mechanized form of guidance and counseling in securing information related to choosing a vocation and planning for its pursuit?

Theoretical Background and Framework

Super et. al., developers of the Educational Career Exploration System (ECES) through IBM, view the need for such a system as perhaps best seen within a framework of vocational development and explain its rationale in such terms.[1] Vocational development is seen as a process which extends throughout life and is divided into relatively consistent stages. These stages are defined as growth, exploration, establishment, maintenance, and decline.

The exploration stage roughly extends from around age 12 to about age 20. The individual makes important educational and occupational decisions at this time which have implications for later opportunities and affect later occupational performance. During these years the individual needs information about himself and the world - new information and experiences which he can incorporate and use in current decision making and future planning.

Current programs for providing vocational guidance to secondary school students do not effectively prepare them for the demands of the present complex society. The number and variety of jobs has increased dramatically. Employers complain that young adults are inadequately trained by the public schools, that they leave the school without any appreciation for the dignity of work, often with insufficient skills to meet the requirements of today's technological society.[2] Students themselves tend to express unsuitable vocational choice and complain of their vocational counseling as a largely unfulfilled need.[3]

In short, the task of the counselor is difficult because of the variety of role definitions, his less than optimal preparation for vocational counseling, and the less than optimal counselor-counselee ratios. Traditionally, vocational counseling has been an information giving process. Yet, counselors cannot remain adequately informed about educational opportunities, job requirements, and the labor market. There are real limitations on the amount of information that can be transmitted and the number of exploratory experiences a counselee can have in a Traditional face to face counseling setting. Also, the demands of counselor time does not permit extensive time for planning and providing exploratory experiences, or for evaluating their effects.

Many studies have attempted to determine the effects of teacher and counselor values, beliefs, attitudes, and expectations on the performance of 'disadvantaged' students. These authors have attempted to validate a type of self-fulfilling prophecy on the part of school personnel who eventually see the child in the performance which they expect.[4] The attitude of such students toward their counselors is indicative of the chasm which exists. Lombana found that non-disadvantaged students exhibited more positive expectations of counselors than did her disadvantaged group.[5] Theimer's findings indicated that vocational considerations were listed sixth among the seven topics usually talked about in interviews.[6] Many such student do not survive the 'negotiation phase' of occupational or other counseling, or are classified as "unsuitable for counseling".[7] Traditional counseling methods often do not appear to be the most congenial to the value orientation, behavior style, or expectation of many 'disadvantaged' youth.

The magnitude of the problem merits attention. The nature of vocational guidance and the assumptions underlying ECES as a computer assisted guidance system which could contribute to guidance was described by Minor, Meyers, and Super.[8] Briefly, the system should be (a) appropriate for individuals who are in the exploratory phase of vocational development and are from varying socio-economic backgrounds; (b) largely under the control of the student; (c) accomodating to individual differences in readiness to participate in such experiences; and (d) (d) students and system should be able to relate in a conversational mode; thus remaining compatible with currently established guidance programs. The computer holds an additional advantage. It has capacity to record, store, and recall large amounts of information quickly and accurately. The possibility of a conversational mode of interaction makes it adaptable to the field of counseling. Finally, in the perception of students, it may provide for an interaction less contaminated by personal values.

Procedures and Data Source

The sample consisted of 346 eleventh graders from five schools selected on the basis of ESEA Title III support allocated them during the 1971-72 fiscal year, and their location in predominantly 'low-income' areas in Flint, Michigan. All schools were participating in the pilot project implementing the computer based career decision making and planning approach. Included were 194 students from three schools with predominantly black enrollment and 152 students from two schools composed of white students. There were 188 students (90 males and 98 females) drawn from ECES users and 158 (71 males and 87 females) drawn from students assigned to Traditional counseling. All students, then in their last term in 11th. grade, had been assigned to the respective methods since the beginning of their ninth grade. Student response to a questionnaire provided the data for the study.

Analysis

Six primary hypotheses attempted to identify significant differences in responses between the two groups concerning (1) frequency of changes in career choices.

(2) overall certainty concerning current choice, (3) feeling of personal involvement in the decision making process, (4) feeling of flexibility toward entering a variety of jobs without additional training, (5) preference for counseling method, and (6) instances of movement within versus outside occupational families as choices were made. Independent variables were method of counseling, frequency of usage, and sex of subjects.

A multivariate analysis of variance ($\alpha = .05$) was used to test the hypotheses. Student grade point average over the three year period formed a covariate in all tests. Chi square analyses of responses on additional items were used to elucidate the results. Additional MANOVA procedures analyzed student evaluations of ECES and Traditional counseling by individual schools, racial composition of schools, and high school program (college preparatory, general academic, and vocational) in which students were enrolled.

Results and Conclusion

Analysis of the data indicated the following:

(1) Significant differences between Traditional and ECES counselees on frequency of changes in career choice in favor of Traditional counselees.

(2) The effect of counseling method on instances of movement within versus outside job families as choices were made was rejected. However, when frequency of usage of method was considered, significant sex differences were found in favor of males.

(3) No significant difference between groups was indicated on expressed feeling of personal involvement except when, with visits ranging in frequency of intervals up to six months, Traditional counselees achieved higher scores while the trend was reversed with less frequent usage.

(4) No significant differences were found between the two groups on (a) preference for method, and (b) feeling of flexibility toward the number of jobs for which they felt they would be qualified without additional training.

(5) Significant differences were found between schools on the counseling available.

(6) ECES was rated more effective in explaining chances for advancement, salary to expect, tools and activities of occupations, while Traditional counseling was considered more effective in explaining qualifications necessary for success, education and training needed, and helping with educational planning.

Educational and Scientific Importance of the Study

Development of computer based guidance systems to supplement Traditional procedures has been a long but steady process. Evaluation of their effectiveness within regular school settings has been minimal. Little if any evaluation of an external nature has so far been made of the ECES though internal evaluations have been made of the 1969-70 Montclair[9] and 1970-71, 1971-72 Genesseo[10] Field trials.

Secondly, in evaluating guidance systems, the unavailability of adequate criteria for what is meant by "success" in individual planning, decision making, and self-management processes also requires extensive study toward the development of constructs for preparing instructional objectives and related behavioral outcomes.

Thirdly, it is clear that such systems are used most effectively when integrated with existing guidance systems to supplement and reinforce programs. The optimal nature of this supplemental role and the kinds of students for which it seems most beneficial are among the many questions which deserve considerable attention if maximal benefits are to be derived from their use.

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